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PATENT COOPERATION TREATY
US INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Applicant: Roger Etter
International App. No.: PCT/US99/19091
International Filing Date: August 20, 1999
Title: PRODUCTION AND USE OF A PREMIUM FUEL
GRADE PETROLEUM COKE
Applicant's file ref.: 1298-002C

Assistant Commissioner for Patents
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Washington, D.C. 20231

LETTER ACCOMPANYING AMENDMENTS UNDER ARTICLE 34

This Amendment is being filed subsequent to the filing of the Demand but prior to the international preliminary examination. Enclosed are replacement sheets 4, 36, 99, 104, 105, 118, 119, 130, 143, 144, 147, 149, 166, and 172-184.

The changes requested herein serve to correct informalities in the application as filed and to amend the claims.

AMENDMENTS

IN THE BACKGROUND OF THE INVENTION

On page 4, lines 7-10, please swap the position of the sentence "Prior art in the delayed coking process, including recent developments, has attempted to maximize the production of cracked liquids with less coke production." with the sentence "Consequently, the volatile material in the petroleum coke by-product typically has a target range of 8-12 wt. %."

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IN THE DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

On page 36, line 6, please delete "Reductions" and substitute in lieu thereof -- Increases--.

On page 99, please delete the table and substitute the following table in lieu thereof:

Basis = 1.0×10^9 Btu/Hr Heat Release Rate as Input

<u>Fuel Characteristics</u>	<u>Current Coal</u>	<u>Upgraded coke</u>	<u>Results</u>
VCM (%wt)	40.0	16.0	60% Lower
Ash (%wt.)	9.1	0.3	97% Lower
Moisture (%wt.)	3.6	0.3	92% Lower
Sulfur (%wt)	4.0	4.3	8% Higher
Heating Value (MBtu/lb)	12.9	15.3	19% Higher
Fuel Rate (Mlb/Hr)	77.8	65.4	16% Lower

Pollutant Emissions: Uncontrolled/Controlled

Ash Particulates (lb/MMBtu or Mlb/Hr)	7.1/0.4	.2/0.1	97% Lower
Sulfur Oxides (lb/MMBtu or Mlb/Hr)	6.2/6.2	5.6/.6	90% Lower
Carbon Dioxide (lb/MMBtu or Mlb/Hr)	238	210	12% Lower

On page 104, line 8, please delete "delayed" and substitute in lieu thereof --fluid--.

On page 105, line 17, please delete "delayed" and substitute in lieu thereof --fluid--.

On page 118, line 24, please delete the first "coke".

On page 118, line 24, please delete "form" and substitute in lieu thereof --from--.

On page 119, line 13, please delete "determinethe" and substitute in lieu thereof -- determine the--.

On page 130, please delete the table and substitute the following table in lieu thereof:

Basis = 1.0×10^9 Btu/Hr Heat Release Rate as Input

<u>Fuel Characteristics</u>	<u>Current Coal</u>	<u>Upgraded coke</u>	<u>Results</u>
VCM (%wt)	44.2	20.0	54% Lower
Ash (%wt.)	10.8	0.3	97% Lower
Moisture (%wt.)	17.6	3.8	78% Lower
Sulfur (%wt)	4.3	5.2	21% Higher
Heating Value (Mbtu/lb)	10.3	14.2	38% Higher
Fuel Rate (Mlb/Hr)	97.0	70.4	27% Lower

Pollutant Emissions: Uncontrolled/Controlled

Ash Particulates (lb/MMBtu or Mlb/Hr)	10.5/.53	.18/0.1	98% Lower
Sulfur Oxides (lb/MMBtu or Mlb/Hr)	8.4/.84	7.4/.15	82% Lower
Carbon Dioxide (lb/MMBtu or Mlb/Hr)	245	214	13% Lower

On page 143, line 3, please delete "carbon: ." and substitute in lieu thereof --carbon--.
 On pages 143-144, please delete the table and substitute the following table in lieu thereof:

Basis = 1.0×10^9 Btu/Hr Heat Release Rate as Input

<u>Fuel Characteristics</u>	<u>Current Coal</u>	<u>Upgraded coke</u>	<u>Results</u>
VCM (%wt)	31.5	16.0	49% Lower
Ash (%wt.)	50.4	0.3	99+% Lower
Moisture (%wt.)	34.1	0.3	99+% Lower
Sulfur (%wt)	1.0	2.5	150% Higher
Heating Value (Mbtu/lb)	3.9	15.3	290% Higher
Fuel Rate (Mlb/Hr)	254	65.4	74% Lower

<u>Pollutant Emissions: Uncontrolled/Controlled</u>	<u>Current Coal</u>	<u>Upgraded coke</u>	<u>Results</u>
Ash Particulates (lb/MMBtu or Mlb/Hr)	128/6.4	0.2/0.1	99+% Lower
Sulfur Oxides (lb/MMBtu or Mlb/Hr)	5.1	3.2/.96	37/81% Lower
Carbon Dioxide (lb/MMBtu or Mlb/Hr)	315	210/150	33/52% Lower

On page 147, please delete the table and substitute the following table in lieu thereof:

Basis = 1.0×10^9 Btu/Hr Heat Release Rate as Input

<u>Fuel Characteristics</u>	<u>Current Coal</u>	<u>Upgraded coke</u>	<u>Results</u>
VCM (%wt)	40.8	16.0	61% Lower
Ash (%wt.)	5.2	0.3	94% Lower
Moisture (%wt.)	23.4	0.3	99% Lower
Sulfur (%wt)	0.44	0.65	48% Higher
Heating Value (Mbtu/lb)	9.5	15.3	61% Higher
Fuel Rate (Mlb/Hr)	105	65.4	38% Lower

<u>Pollutant Emissions: Uncontrolled/Controlled</u>	<u>Current Coal</u>	<u>Upgraded coke</u>	<u>Results</u>
Ash Particulates (lb/MMBtu or Mlb/Hr)	5.5/.3	0.2/0.1	97% Lower
Sulfur Oxides (lb/MMBtu or Mlb/Hr)	0.92	0.85	8% Lower
Carbon Dioxide (lb/MMBtu or Mlb/Hr)	277	210/190	23/31% Lower

On page 149, please delete the table and substitute the following table in lieu thereof:

Basis = 1.0×10^9 Btu/Hr Heat Release Rate as Input

<u>Fuel Characteristics</u>	<u>Current Coal</u>	<u>50/50 Coal/Coke</u>	<u>Results</u>
VCM (%wt)	40.2	28.1	32% Lower
Ash (%wt.)	9.1	4.7	48% Lower
Moisture (%wt.)	5.2	2.8	46% Lower
Sulfur (%wt)	2.3	3.3	43% Higher
Heating Value (Mbtu/lb)	12.5	13.9	11% Higher
Fuel Rate (Mlb/Hr)	79.7	72.6	9% Lower

<u>Pollutant Emissions: Uncontrolled/Controlled</u>	<u>Current Coal</u>	<u>Upgraded coke</u>	<u>Results</u>
Ash Particulates (lb/MMBtu or Mlb/Hr)	7.3/0.7	3.8/0.4	43% Lower
Sulfur Oxides (lb/MMBtu or Mlb/Hr)	3.7/3.7	4.7/1.4	62% Lower
Carbon Dioxide (lb/MMBtu or Mlb/Hr)	216	210	3% Lower